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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/790,443

03/01/2004

Ulrich Barthold

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9782

7590

08/02/2005

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EXAMINER

NICHOLSON III, LESLIE AUGUST

ART UNIT

PAPER NUMBER

3651

DATE MAILED: 08/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/790,443	Applicant(s) BARTHOLD ET AL.	
	Examiner Leslie A. Nicholson III	Art Unit 3651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/1/2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/12/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is a first action on the merits of application 10/790443.

Specification

2. The specification is objected to because of the following informalities:

Each of the headings should appear in upper case, without underlining or bold type as provided in 37 CFR 1.77(b). Appropriate correction is required.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and **legal phraseology often used in patent claims**, such as "means" and "said," **should be avoided**. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The legal phraseology included is "whereby" in lines 4,5, and 8. Instead of using the word "whereby", in each place that it is used, the text following it should form a separate sentence.

The abstract of the disclosure is objected to because the reference numerals of the "at least one frictional wheel" (L2,6,11) conflicts with that of the detailed description. Correction is required.

See MPEP § 608.01(b).

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "40" has been used to designate both a friction wheel and a friction wheel shaft (Fig.2), and because reference character "22" has been used to designate both a leaf spring and a housing side.

The drawings are objected to because reference numeral 42 (in Fig.2) points to a roller shaft, while the specification references it as a friction wheel.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claim 4,5,11, and 12 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. No structure claimed allows or provides for the restoring force. The claims fail to further limit the claim they are dependent on. What structure provides the restoring force? See MPEP 2114.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 5,7,12,14,19, and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 5,12, and 19, each claim recites the limitation "the pre-stressing elements" in line 2 in each of the claims. There is insufficient antecedent basis for this limitation in the claim.

Regarding claims 7,14, and 22, it is unclear whether the spring consists of steel or if "spring steel" is a different and special alloy used in springs. What is spring steel?

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claim 1,2,3,4,5,15,16, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Leib USP 5,385,342.

Regarding claim 1 and 15, Leib discloses a similar apparatus for transporting sheet-shaped materials comprising a(n):

- spring plate (21) (C5/L54-57)
- frictional wheel (19) rotatably mounted on the spring plate (Fig.3) (C5/L54-57)
- actuating element (16) for bending the spring plate between a first active bending state and a second passive bending state (Fig.1,2)
- wherein the frictional wheel is in contact with sheet-shaped materials (1) when the spring plate is in the active bending state and is not in contact with sheet-shaped materials when the spring plate is in the passive bending state (Fig.1,2)

Regarding claim 2 and 16, Leib discloses the apparatus wherein the spring plate is predeformed with a radius (Fig. 2).

Regarding claim 3 and 17, Leib discloses the apparatus wherein the spring plate is in a bi-stable bending state when in one of the active bending or

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passive bending states (where in these two states of the spring plate, as shown by Fig.1 and 2, the spring plate is stable in that it does not rotate with respect to any of three axes in space) (see Examiner's Note ¶15).

Regarding claim 4 and 5, see ¶4.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 7 and 22, as best understood by the examiner (see ¶6) are rejected under 35 U.S.C. 103(a) as being unpatentable over Leib USP 5,385,342 in view of Jakubowski USP 3,645,378.

Leib discloses all the limitations of the claim (see ¶8) but does not expressly disclose the apparatus wherein the spring plate is a plate of spring steel (also see ¶4,6).

Jakubowski teaches a spring plate (50) wherein the spring plate is a plate of spring steel (C3/L62-65) (Fig.3) for the purpose of using a spring plate with desired material properties for bending (C3/L75).

At the time of invention it would have been obvious to one having ordinary skill in the art to have made the spring plate of spring steel, as taught by

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Jakubowski, in the device of Leib for the purpose of using a spring plate with desired material properties for bending.

11. Claims 1,4,5,6,15,18,19,20, and 21, as best understood by the examiner (see ¶4,6), are rejected under 35 U.S.C. 103(a) as being unpatentable over Frank DE 4243986 A1 in view of Kobayashi DE 2042887 B.

- Regarding claim 1 and 15, Frank discloses a similar device comprising an actuating element (12) and a frictional wheel (18).
- Regarding claim 6,20, and 21 Frank discloses the apparatus wherein the actuating element is a cam wheel (12) that has at least one minimum and one maximum radius and the transition between the radii is continuous (Fig.3,4).

Frank does not expressly disclose a spring plate, an actuating element for bending the spring plate between a first active bending state and a second passive bending state, or a frictional wheel rotatably mounted on the spring plate wherein the frictional wheel is in contact with sheet-shaped materials when the spring plate is in the active bending state and is not in contact with sheet-shaped materials when the spring plate is in the passive bending state.

Kobayashi teaches a spring plate (43) and an actuating element for bending the spring plate between a first active bending state and a second passive bending state, and a frictional wheel (31) rotatably mounted on the spring plate (P8/L4-5) wherein the frictional wheel is in contact with sheet-shaped materials when the spring plate is in the active bending state and is not in contact with sheet-shaped materials when the spring plate is in the passive bending state

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(Fig.3) for the purpose of transporting sheet-shaped materials by bending the spring plate so the friction roller makes contact with such materials for feeding (at least abstract).

At the time of invention it would have been obvious to one having ordinary skill in the art to have modified the device of Frank through the teaching of Kobayashi, by using an actuating element to bend the spring plate instead of the hinged lever disclosed, having a frictional wheel rotatably mounted on the spring plate, between a first active bending state and a second passive bending state for the purpose of transporting sheet-shaped materials by bending the spring plate so the frictional wheel makes contact with such materials for feeding.

- Regarding claim 18 and 19 Frank discloses all the limitations of the claims (see ¶11) but does not expressly disclose the apparatus wherein when the spring plate is in the passive state, a restoring force pre-stresses it in the direction of the active bending state, or wherein the restoring force is at least partially applied by the pre-stressing elements.

Kobayashi teaches a restoring force pre-stressing the spring plate in the direction of the active bending state when the spring plate is in the passive bending state (Fig.2,3), and teaches the restoring force at least partially applied by the pre-stressing elements for the purpose of forcing the friction wheels to feed the sheet-shaped materials along a feed path (at least abstract).

At the time of invention it would have been obvious to one having ordinary skill in the art to have modified the device of Frank through the teaching of Kobayashi, so a restoring force pre-stressing the spring plate in the direction of

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the active bending state when the spring plate is in the passive bending state wherein the restoring force is at least partially applied by the pre-stressing elements (12; Frank) for the purpose of forcing the friction wheels on the sheet-shaped materials to feed them along a feed path.

12. Claim 8,9,10,11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leib USP 5,385,342 in view of Silveira USP 5,609,334.

- Regarding claim 8, Leib discloses all the limitations of the claim (see ¶8), and also discloses a controller (26).
- Regarding claim 9, Leib discloses the apparatus wherein the spring plate is predeformed with a radius (Fig. 2) for the purpose of forcing the frictional wheel against the sheet-shaped materials.
- Regarding claim 10, Leib discloses the apparatus wherein the spring plate is in a bi-stable bending state when in one of the active bending or passive bending states (where in these two states of the spring plate, as shown by Fig.1 and 2, the spring plate is stable in that it does not rotate with respect to any of three axes in space) (see Examiner's Note ¶15).

Regarding claim 11 and 12, see ¶4.

Leib does not expressly disclose the apparatus comprising a housing or a spring plate mounted in the housing.

Silveira teaches a housing (42) in order to cover the sheet-transporting apparatus and sheets for the purpose of protecting them from foreign elements such as dust and debris (C5/L9-16).

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At the time of invention it would have been obvious to one having ordinary skill in the art to have modified the device of Leib to use a housing, as taught by Silveira, in order to cover the spring plate, sheet-transporting apparatus, and sheets for the purpose of protecting them from foreign elements such as dust and debris.

13. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leib USP 5,385,342 in view of Silveira USP 5,609,334 and in further view of Jakubowski USP 3,645,378.

Leib discloses all the limitations of the claim (see ¶12) but does not expressly disclose the spring plate being a plate of spring steel.

Jakubowski teaches a spring plate (50) wherein the spring plate is a plate of spring steel (C3/L62-65) (Fig.3) for the purpose of using a spring plate with desired material properties for bending.

At the time of invention it would have been obvious to one having ordinary skill in the art to have employed the device of Leib, and modified it through the teaching of Jakubowski, by using a spring plate of spring steel for the purpose of using a spring plate with desired material properties for bending.

14. Claims 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frank DE 4243986 A1 in view of Kobayashi DE 2042887 B and further in view of Silveira USP 5,609,334.

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Regarding claim 8, Frank discloses all the limitations of the claim (see ¶11) and additionally discloses a controller (cam 12 rotates via a controller), but does not expressly disclose the apparatus comprising a housing.

Silveira teaches a housing (42) (see ¶12) in order to cover the sheet-transporting apparatus for the purpose of protecting it from foreign elements such as dust and debris (C5/L9-16).

At the time of invention it would have been obvious to one having ordinary skill in the art to have modified the device of Leib to employ a housing as taught by Silveira, in order to cover the sheet-transporting apparatus for the purpose of protecting it from foreign elements such as dust and debris.

- Regarding claim 13, Frank discloses the apparatus wherein the actuating element is a cam wheel (12) that has at least one minimum and one maximum radius and the transition between the radii is continuous (Fig.3,4).

Examiner's Note

15. Regarding claim 3, 10, and 17, the applicant has not explicitly defined the term bi-stable. Therefore, the examiner has given the term its broadest interpretation (i.e., stable in more than one way).

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

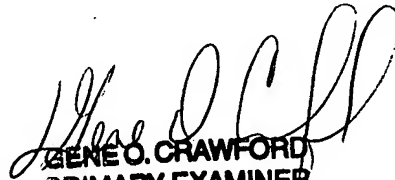
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17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie A. Nicholson III whose telephone number is 571-272-5487. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on 571-272-6911. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

L.N.
July 21, 2005


GENE O. CRAWFORD
PRIMARY EXAMINER